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2003
Electric Division

January 9, 2003

Mr. Scot Cullen, Chief Electric Engineer
Public Service Commission
610 N. Whitney Way
P.O. Box 7854
Madison, WI 53707-7854

RE: In the Matter of Filing Reporting Requirements for Appropriate Inspection and Maintenance, PSC Rule 113.0607(6)

Dear Mr. Cullen:

Enclosed for filing are 3 copies of Boscobel Utility's report to the commission, submitted every two years, showing compliance with its Preventative Maintenance Plan.

Very truly yours,

Mike Reynolds P.E.
Director of Public Works/Utilities

Enclosures

# TWO YEAR REPORT DOCUMENTING COMPLIANCE WITH THE PREVENTATIVE MAINTENANCE PLAN

## Boscobel Utilities

**FILING DEADLINE**
**FEBRUARY 1, 2003**

January 9, 2003

Mike Reynolds P.E.

Director of Public Works/Utilties

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This report format was prepared by the MEUW work group for PSC Rule 113.0607 for use by the 82 municipal electric utilities in Wisconsin and endorsed by PSC staff as meeting the requirements of Rule PSC 113.0607.

## I Reporting Requirements: PSC 113.0607(6) states;

Each utility shall provide a periodic report to the commission showing compliance with its Preventative Maintenance Plan. The report shall include a list of inspected circuits and facilities, the condition of facilities according to established rating criteria, schedules established and success at meeting the established schedules.

## II Inspection Schedule and Methods:

| SCHEDULE: | MONTHLY | ANNUAL | EVERY 5 YEARS |
|---|---|---|---|
| Transmission (≥69Kv) | | X | X |
| Substations | X | X | |
| Distribution (OH & UG) | | | X |

METHODS: Five criteria groups will be used to complete the inspection of all facilities.

1. IR – infrared thermography used to find poor electrical connections and/or oil flow problems in equipment.
2. RFI - Radio Frequency Interference, a byproduct of loose hardware and connections, is checked using an AM radio receiver.
3. SI – structural integrity of all supporting hardware including poles, crossarms, insulators, structures, bases, foundations, buildings, etc.
4. Clearance – refers to proper spacing of conductors from other objects, trees and conductors.
5. EC – equipment condition on non-structural components such as circuit breakers, transformers, regulators, reclosers, relays, batteries, capacitors, etc.

Distribution facilities will be inspected by substation circuits on a 5-year cycle such that the entire system will be inspected every 5 years. Inspector instructions for inspecting all facilities and forms are included in the plan.

## III Condition Rating Criteria

This criterion, as listed below, establishes the condition of a facility and also determines the repair schedule to correct deficiencies.

0) Good condition
1) Good condition but aging
2) Non-critical maintenance required – normally repair within 12 months
3) Priority maintenance required – normally repair within 90 days
4) Urgent maintenance required – report immediately to the utility and repair normally within 1 week

## IV Corrective Action Schedule

The rating criteria as listed above determine the corrective action schedule. Priority rated maintenance and higher is done immediately. Non-critical maintenance is usually completed within 7 days or as time permits.

## V Record Keeping

All inspection forms and records will be retained for a minimum of 10 years. The inspection form contains all of the required critical information i.e. inspection dates, condition rating, schedule for repair and date of repair completion.

## VI Reporting Requirements

A report and summary of this plan's progress will be submitted every two years with the first report due to the Commission by February 1, 2003. The report will consist of a cover letter documenting the percent of inspections achieved compared to the schedule and the percent of maintenance achieved within the scheduled time allowance.

## VII Inspected Circuits and Facilities

| Circuit # and description | Substation |
|---|---|
| Circuit 9 was inspected in 2001. Overhead was inspected and repairs were made to guy guards and signs. Tree trimming done for clearance and three poles were replaced. No other significant maintenance was needed. UG pedestals and transformers were inspected elbows were infrared inspected all locks checked. No other significant maintenance was required. | Monthly substation inspections, annual inspection and biannual oil inspection (2002) Infrared inspection done annually. No maintenance was required following these inspections. |
| Circuit 10 was inspected in 2002. Changed from copper to ACSR replacing 3000 feet along Highway 61 and replaced 8 poles. Overhead was inspected and repairs were made to guy guards and signs. Tree trimming done for clearance. No other significant maintenance was needed. UG pedestals and transformers were inspected elbows were infrared inspected all locks checked. No other significant maintenance was required. | |
| | |
| | |
| | |

Base load and peaking generation, less than 50 megawatts per unit in size, is typically subject to pre-operational checks, in addition to checks and maintenance during and after periods of operation. Emergency generation is test run and maintained every *(type in a period of time not exceeding one month)*to confirm its operational readiness.

## VIII Scheduling Goals Established and Success of Meeting the Criteria:

It was this utility's goal to complete all monthly substation inspections, annual transmission line inspections and to inspect 20% of the distribution system. In addition, we expected to complete all scheduled maintenance resulting from the inspections within the prescribed time periods specified in the rating criteria.

All of the inspection goals were met or exceeded. 40% of the distribution system was inspected in the two-year reporting period. There were 0 instances of priority or higher repairs needed. All other maintenance was repaired on time. In 2003 the Industrial Park (Circuit 13) will be upgraded to include 600 amp modules and the installation of pad mount switchgear.

## IX Facility condition – rating criteria:

During the past two years, 40% of the distribution system was inspected and found to be in good condition. During the past two-years all .9 miles of the transmission system was inspected and found to be in good condition. Monthly and annual substation inspections were completed on time. Of the items found requiring maintenance, all were repaired before they were responsible for an outage to customers. Storm related outages have been minimal. 2 outages affected 100 customers for a total duration of 2 hours and 30 minutes. One outage affected 200 residential/commercial customers for a total of 50 minutes. There were no equipment failures except for the occasional squirrel or auto into a pole. Most of the system is 20 years old or less and based on our inspections, maintenance needs and system improvements our system would be rated as in good condition.